

**DESCRIPTION AND MANAGEMENT OF STRESS OF
DIABETES MELLITUS PATIENTS IN INTERNAL
DISEASE POLYCLINIC DR. MOEWARDI
GENERAL HOSPITAL**

MANUSCRIPT

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Naskah artikel tersebut layak dan dapat disetujui untuk dipublikasikan. Demikian persetujuan ini dibuat semoga dapat dipergunakan seperlunya

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RESEARCH

DESCRIPTION AND MANAGEMENT OF STRESS OF DIABETES MELLITUS PATIENTS IN INTERNAL DISEASE POLYCLINIC DR. MOEWARDI GENERAL HOSPITAL

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Complications experienced by patients with diabetes include peripheral neuropathy is nerve damage in the hands and feet. The other complication include blindness that is caused by diabetic retinopathy, neurological disorders, kidney failure, gangrene and stroke. Patients with diabetes are at risk of ulcer or gangrene. They also have risk of amputation. Those complications may cause a major change for the diabetic patients. The major change such as complication, lifestyle change with a strict diet or diabetes management that will be stress. Stress is a situation that someone has to respond or take action. Patients with diabetes need to have efforts to increase their motivation. When the patients are stress, they obey the diabetes treatment plan. The efforts are stress management. The purpose of stress management in patients with diabetes mellitus is to optimize the metabolic control and the quality of life, so that it prevents the emergence of complications and diabetic patient anxiety. The purpose of the study is to know the description of stress and stress management for patients with diabetes mellitus in internal disease polyclinic of Dr. Moewardi Hospital. This study is a descriptive survey. The sample are 41 patients, they are chosen by accidental sampling technique. In collecting data, the writer uses questionnaire. To measure the stress levels, the writer uses a questionnaire Diabetes Distress Scale (DDS) which is adapted from the Improving Access to Psychological Therapists (2013). To measure the stress management, the writer uses questionnaire stress management that is adapted from stress management indicators Widodo 2013 and developed by the writer. To analyze the data, the writer uses univariate analysis. This research concludes that almost the stress level of the diabetic patients in Internal diseases Polyclinic of Dr. Moewardi Hospital is not stress or mild stress, and the stress management is good enough.

Keywords: stress, stress management, diabetes mellitus

INTRODUCTION

Diabetes Mellitus (DM) is a metabolic progressive chronic, with manifestations of glucose and lipid metabolism disorders it is accompanied by chronic complications of constriction of blood vessels. High risk of diabetes can enable the client weaken the kidney, blind, disease in their foot and many serious complications and it causes a high mortality rate. Every day,

diabetic patient is in a danger. It is because of blood glucose are not controlled (Pangestu, 2007).

American Diabetes Association (ADA) (2012) report that diabetes mellitus (DM) is the chronic disease that needs medical handling, education about self-management and also the support to prevent the chronic or acute complication that is marked by the

dysfunction of metabolism, carbohydrate, protein, insulin.

World Health Organization (WHO) expresses that, today, there are 366 million people with Diabetes Mellitus, in 2000 there are 8,4 million in Indonesia and it will increase to 21,8 million in 2030. Indonesia is in the fourth after United States, China, and India (Taluta, et.al, 2012).

Prevalence of Diabetes Mellitus patient in Indonesia at 2007 was 1,1%. It increases in 2013 to 2,4%. Diabetes Mellitus prevalence tends to be higher for people who live in urban areas than in rural areas. According to Riskesdas (it is reviewed from education sector), the prevalence diabetes mellitus is higher in people with higher education levels (Riskesdas, 2013).

Data of diabetic patient in the Dr. Moewardi Hospital in 2014 are type I is 79 patients and type II is 8.091 patients. In 2015 from January to May 2015 diabetic patient in the Dr. Moewardi Hospital is 38 patients for the type I and 2.816 patients for type II.

The increasing of disease of diabetic patients will increase the psychological diabetic patient, one of psychological impact is stress. Diabetic patient have the higher level on stress, and if the level stress increases, the glycemic control is progressively deteriorate (Eom, et.al, 2011).

Stress Management in diabetic patient is the continue process that facilitate the knowledge, the skill and the ability of diabetic patient do self-care. The purpose of stress management for diabetic patient is to optimize the metabolic control and the quality of diabetic patient life, so it prevents the complications and anxiety of diabetic patient (Surwit, 2002). Generally, diabetic patient gets the stress because of the fear

of the complication, change of economic life style status and the environment that will be experienced by the client, and a long-term medication, therefore the writer want to do the research that it relates to the description of stress and stress management for patient with diabetes mellitus.

BASICTHEORY

Diabetes Mellitus

Diabetes Mellitus (DM) is a genetically and clinical metabolic disorder that includes heterogeneous. It is marked by manifestations such as intolerance carbohydrate (Price & Wilson, 2006).

According to the Price & Wilson (2006), the classifications of diabetes Mellitus are:

- 1) Diabetes Mellitus type 1 or IDDM (*Insulin Dependent Diabetes Mellitus*)
- 2) Diabetes mellitus type 2,
- 3) Diabetes Gestational (pregnant diabetes),
- 4) Diabetes mellitus special type

Complication of Diabetes Mellitus

Complications that occur in diabetic patient can be classified into two types: acute complications and chronic complications.

Some damage and disturbance are caused by complications of diabetes mellitus disease include: (Mahendra, et al., 2008)

- a. Vasculopathy damage
- b. The disorder of Cardiac
- c. The disorder of Brain vessels
- d. The disorder of Blood vessel in legs
- e. Unstable blood pressure
- f. The disorder of Neuropathy
- g. The disorder of Eye (retinopathy)
- h. The disorder of Kidney (nephropathy)

Stress

Stress is a condition where someone is in the stress that is caused by conditions that influence their self. Stress is also a response that comes from a person against physical and mental problem that comes from within or outside. Therefore, if human is life, they cannot avoid stress (Nasruddin, 2010).

Patient with diabetes have to realize the possibility of retreating of control diabetes that accompanying emotional stress. They need motivation to obey the treatment plan. They also get the learning strategies that can minimize the effect of stress and they can handle it when the stress occurs. It is important in diabetes education. (Smeltzer& Bare, 2008).

Stress for Patients with Diabetes Mellitus

There are two kinds of diabetes, it is diabetes type I and type II diabetes. Type I or Insulin Dependent Diabetes Mellitus (IDDM) is the most common diabetes for young adult and children, even though this can also occur at any age. Treatment for the type I is insulin injection to the patient. The second type is Non-Insulin Dependent Diabetes Melitus (NIDDM) (Mahendra, et.al, 2008)

Stress can occur in both types. It is mentioned in Jamaluddin (2009). He says about the research stress coping strategies for people with diabetes mellitus with self-monitoring as a mediating variable.

The Causes of Stress in Patients with Diabetes Mellitus

The psychological impact of the disease will be felt by the patient since the doctor diagnosed. The

disease happens in several month or more than one year. Patient will has mental disorders include stress. The patient must do the therapy.

Diabetic patient gets the stress because of the information, which says that the disease is difficult to heal, and if the patient wants to heal, the patients must be able to change his lifestyle with a strict diet, the patient will feel that the conditions will not being good.

Stress can increase the stress hormone (counter regulatory hormone) such as epinephrine hormone, glucagon, cortisol and growth hormone that generate the insulin resistance directly and it effects on the fluctuation in the blood glucose. (Maghfirah, 2013).

Stress Management for Patients with Diabetes Mellitus

Stress management for patient with diabetes mellitus (Widodo, 2013) include:

1. This viewpoint of the illness
Negative viewpoint that they have done the same routine like diet and taking medication, but the blood glucose is still high.
 2. Social Support
Meet with the other diabetes patient is required for diabetic patient.
 3. Coping Strategy
Good coping strategy can prevent irrational thinking so that psychology adaptation becomes better. The examples are physical activity, relaxation, positive and favored activities, and think positively about the disease.
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Concept Framework

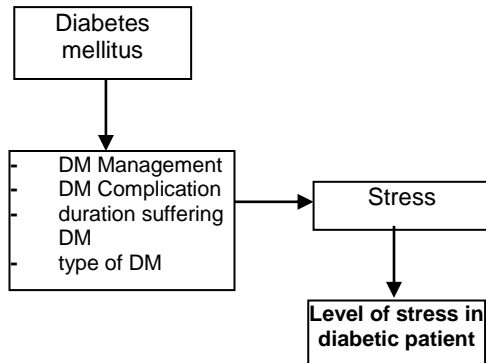


Figure 1. Concept Framework

Research Questions

- 1) What is respondent characteristic in diabetic patient?
- 2) What is stress level in diabetic patient?
- 3) What is stress management in diabetic patient?

RESEARCH METHODOLOGY

Research design

This study uses a descriptive survey research. It is used to measure a particular symptom without investigating why the symptoms occurred. Descriptive study tries to describe a situation or occurrence, but the character of collected data is descriptive, so that the writer does not need the prediction, study about implication and test the hypothesis. This research learns the description of the stress and the stress management for diabetic patient.

Place and Time

Place of study implemented at the Internal Disease Polyclinic Dr. Moewardi Hospital in June-July 2015.

Population and Sample

The populations in this research are all diabetic patient in internal disease polyclinic of Dr. Moewardi Hospital at 2015.

The sample was 41 patients with *accidental sampling* technique.

Research Instruments

This research uses questioner.

To measure stress levels, the writer uses Diabetes Distress Scale (DDS) questionnaire. That is adapted from the Improving Access to Psychological Therapists (2013), and the writer has translated it.

To measure the stress management, the writer uses questionnaire stress management. The writer adapts from stress management indicators (Widodo, 2013).

Data Analysis

The data analysis is univariate. In order testing and analyzing the data, the writer uses univariate analysis.

RESULT AND DISCUSSION

Univariat Analysis

Respondent Characteristic

Table 1. Respondent Characteristic

No	Characteristic	Frequency	(%)
1	Gender		
	Man	15	36,6
	Woman	26	63,4
	Total	41	100,0
2	Age		
	20– 30 years old	1	2,4
	31– 40 years old	2	4,9
	41– 50 years old	11	26,8
	51– 60 years old	20	48,8
	60 –63 years old	7	17,1
	Total	41	100,0
3	Education		
	Do not school	2	4,9
	Elementary School	9	22,0
	Junior High School	16	39,0
	Senior High School	8	19,5
	College	6	14,8
	Total	41	100,0
4	Job		
	Wiraswasta	7	17,1
	Factory labour	5	12,2
	Farmer	1	2,4
	private sector officer	3	7,3
	PNS/TNI/Polri	4	9,8
	Housewife	21	51,2
	Total	41	100,0
5	DM Duration Suffer		
	< 10 years	30	73,2
	11 – 20 years	9	22,0
	> 20 years	2	4,9
	Total	41	100,0
6	DM Type		
	Type1	6	14,6
	Type 2	35	85,4
	Total	41	100,0
7	DM Complication		
	No complication	20	48,8
	Vasculopathy	1	2,4
	Heart sickness	8	19,5
	Gangren	2	4,9
	Nerve trouble	1	2,4
	Hipertention	6	14,6
	Hipertiroid	1	2,4
	Breast cancer	1	2,4
	Lung disease	1	2,4
	Total	41	100,0

Stress Level of Diabetic Patient

Table 2. Frequency Distribution of Stress Level

No	Stress Level	Frequency	%
1	No stress/light stress	27	65,9
2	Midle stress	11	26,8
3	High stress	3	7,3
	Total	41	100,0

Stress Management

Table 3. Frequency Distribution of Stress Management

No	Stress Management	Frequency	%
1	Less	2	4,9
2	Enough	21	51,2
3	Good	18	43,9
	Total	41	100,0

Discussion

Characteristic of Respondent

The result based on the distribution characteristics of respondents especially according to gender are women. Diabetes mellitus can be found mostly in women than men. Because women have LDL or bad cholesterol with triglyceride levels higher than the men, and there is a difference in doing the activities and lifestyle that affect the disease, and that is one of the factors of the risk of Diabetes Mellitus (Suyono, 2007).

The result based on distribution of respondents especially by the age shows that the highest distribution is aged 51- 60 years. The increase causes a person at the risk for an increased incidence of diabetes. When people begin to the age of 55 years above, it is associated with the occurrence of diabetes, it is because of the old age. The body functions physiologically are decreased, it can be happen due to a decrease in the secretion or insulin resistance so that the ability of the body's functions

to control high blood glucose is than less optimal (Suyono, 2007).

The result based on the distribution of respondents especially to education shows that the highest distribution is a junior high school. The level of education is related to a personal knowledge. Level of education can increase knowledge about health. Education is very important in influencing the mindset. An educated people will try their best thinking in resolving the issue. Well-educated people tend to think (Potter& Perry, 2009). Low education are not directly related to poverty, homeless, as well as the difficulty of finding a permanent job eventually trigger depression (Vamos et.al, 2009).

The result based on the distribution especially on the occupation shows that the most respondents are housewives. Housewives are also very susceptible to stressful. It is caused by a variety of difficulties encountered housewives that make they feel the household tasks that make the mother feel depressed (Kartono, 2006).

The result shows that most diabetes mellitus respondents who are less than 10 years are 73.2%. Niven (2002) expresses that they are who have the treatment more than 4 years, they have been able to adapt to the illness. The longer patient has the therapy of disease they will more obey, it is caused the patients have reached the accepted phase.

Based on the type of diabetes, type 2 dominates the issues. It shows that type 2 are 35 respondents (85,4%) and type 1 as 6 respondents (14,5%). Type 2 happens because the pancreas cannot produce enough insulin or body is unable to use the insulin effectively, so the glucose excess in

the blood. DM Type 2 can be happened at the middle of the age and the patients are overweight (Smeltzer& Bare, 2008).

Respondents Stress Level

The frequency distribution of respondents indicate that stress levels show mostly do not stress or mild stress are 27 respondents (65,9%). The disease that affects a person can be source of stress, this can be caused by the level of understanding about the disease, so that people suffering fear and finally arise their stress.

Disease is the situations that threaten someone live. In the normal state, before someone dies, he will get sick or death that is caused by accidents and others. The disease is often to become a source of stress, and the people who sick do not understand their problem and the treatment (Eom, et.al, 2011).

Based on the distribution of age, most respondents age less than 60 year. Wulansari (2011) says that highest level of stress for diabetic patient is at 60 years old. It is because of the worries. It comes from the view of the future and the decrease of health. It is different with the patients who are more than 60 years old. They feel resigned that make their body decrease the stress.

Factors of long-suffering with diabetes experienced by the respondents also associated with stress levels of respondents. Factor stress are psychoeducative factor/socio cultural that consist of personality growth, experience, and other condition (Maghfirah, 2013). Other factor is the information that the disease is difficult to heal and patient have to change their life style by doing tight diet.

The same opinion that is written by Amalia (2013). She says about

how long the patients with diabetes will get stress. The research is conducted in the internal disease polyclinic of Dr. Soebandi Jember. Research concludes that there are a relation between them. The correlation Spearman is equal to -0,543. It indicates that the negative correlation direction with the middle strength. It indicates that the longer they got the disease, the shorter they got the stress.

Respondent Stress Management

The frequency distribution of management stress shows that the most respondents have enough stress management, in number are 21 respondents (51,2%). Stress management is the effort people to look for the way of matching with its condition to decrease the existing stress and the background of the stress. Stress management for patient is an effort of diabetic patients to manipulate their point of view of the diseases, and the existence of social support and coping strategy.

Research shows good stress management. It is caused some supporting factors such as education levels of the patients.

Even the most education level of patients are junior high School, but there are 36% patients who are in the senior high school and college of education level. Education level relates to their ability to comprehend and adopt an information become the knowledge.

It is mentioned by Potter & Perry (2009), they say that education level can improve the healthy knowledge. Education represents the very important thing in influencing someone. Educated people will think well to face the problem. Ability of think well can assist the people to do right action.

Stress is an important aspect that must be considered in the management of diabetes, because stress will affect glycemic levels of diabetic patients. Family plays a valuable role in an individual's life and stress does influence the family functioning of subjects. Involving family members as a part of diabetes management plays a major role. Positive interpersonal relationships help in managing diabetes in a better way. (Bhandary, Rao S. & Sanal, 2013). That can be concluded the positive interpersonal relationships will reduce stress of the diabetic patients.

CONCLUSION AND SUGGESTION

Conclusion

This research represent the descriptive research for diabetic patient in Internal Disease Polyclinic of Dr. Moewardi Hospital. Research is conducted in July 2015. The respondents are 41 people who got the diabetes disease. The result indicates that the most respondent is a woman, by the age is above 60 years, Junior High School education level, they work as a housewife, 10 years of illness, DM Type II, and there is no complication of DM. Moreover, they are in the light stress. The last, the stress management at diabetic patient in Internal Disease Polyclinic of Dr. Moewardi Hospital is good enough.

Suggestion

1. For Hospital

The hospital should improve the effort of patient's knowledge about stress management. It can be done by reminding the patient to obey the tight diet. It can prevent the complication.

2. For Diabetic Patient
The patient must improve their knowledge about how to prevent the complication. It can decrease the complication and stress.
3. For Next Researcher
The next researcher should improve the quality of research by changing the research to be the correlational research. Furthermore, the researcher can add the other related factors of stress.

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